--74. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate to provide a second porous layer adjacent the first porous layer opposite the surface, said second porous layer having a second porosity greater than said first porosity;

forming a semi-conductor film on the first porous layer; and

separating the semi-conductor film from the semi-conductor substrate at a porous layer consisting of the first and second porous layers.

75. (New) The method according to claim 74 wherein said separating is performed along a line of relative weakness defined in or adjacent said second porous layer.

76. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

forming a first porous layer adjacent said surface having a first porosity;

forming a second porous layer adjacent said first porous layer having a second porosity higher than said first porosity;

forming a semi-conductor film on said surface; and

separating said semi-conductor film from said semi-conductor substrate.

77. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

forming a first porous layer adjacent said surface having a first porosity;

forming a second porous layer having a second porosity higher than said first porosity;

forming a semi-conductor film on said surface; and

separating said semi-conductor film from said semi-conductor substrate.

78. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate to provide a second porous layer adjacent the first porous layer opposite the surface, said second porous layer having a second porosity greater than said first porosity;

forming a semi-conductor film on the first porous layer; and

separating the semi-conductor film from the semi-conductor substrate along a line of relative weakness defined in or adjacent said second porous layer.

79 . (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate at a current density that is changed to provide a first porous layer adjacent the surface having a first porosity, a second porous layer adjacent the first porous layer opposite the surface, the second porous layer having a second porosity greater than the first porosity, and a third porous layer adjacent the second porous layer, the third porous layer having a third porosity different from said second porosity;

forming at least one semi-conductor film on the surface and first porous layer; and

separating the semi-conductor film from the semi-conductor substrate at the layer of the first through third porous layers having the highest porosity.

80. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate at a first current density to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer within the first porous layer opposite the surface, the second porous layer having a second porosity greater than the first

porosity thereby providing a third porous layer adjacent the second porous layer, the third porous layer having a porosity different than said second porosity;

forming at least one semi-conductor film on the surface and first porous layer; and

separating the semi-conductor film from the semi-conductor substrate along a line of relative weakness defined in the layer having the highest porosity.

81. (New) A method as defined in claim 79, wherein in said anodizing step, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said current density that is changed.

82. (New) A method as defined in claim 80, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first and second current density, respectively.

83. (New) A method as defined in claim 81 or 82, wherein the electrolytic solution comprises hydrogen fluoride and a hydrocarbon alcohol.

84. (New) A method as defined in claim 81, wherein in the anodizing step , the composition of the electrolytic solution used is the same.

85. (New) A method as defined in claim 82, wherein in the anodizing steps, the composition of the electrolytic solution used in each anodizing step is the same.

86. (New) A method as defined in claim 81, wherein in the anodizing step , the composition of the electrolytic solution used varies.

87. (New) A method as defined in claim 82, wherein in the anodizing steps, the composition of the electrolytic solution used in the anodizing steps varies.

88. (New) A method as defined in claim 79, further comprising the step of annealing the semi-conductor substrate in a hydrogen atmosphere after the anodizing step and before the forming step.

89. (New) A method as define in claim 80, further comprising the step of annealing the semi-conductor substrate in a hydrogen atmosphere after the anodizing steps and before the forming step.

90. (New) A method as defined in claim 88, further comprising the step of oxidizing the anodized substrate after the anodizing step and before the hydrogen annealing step.

91. (New) A method as defined in claim 89, further comprising the step of oxidizing the anodized substrate after the anodizing steps and before the hydrogen annealing step.

92. (New) A method as defined in claim 79 or 80, wherein in the forming step the semi-conductor film is epitaxially grown.

93. (New) A method as defined in claim 79 or 80, wherein the semi-conductor substrate is a single crystal silicon substrate.

94. (New) A method as defined in claim 79 or 80, wherein the semi-conductor substrate is an impurity-doped semi-conductor substrate.

95. (New) A method as defined in claim 79 or 80, further comprising the step of attaching a support substrate to the semi-conductor film after the forming step and before the separating step.

96. (New) A method as defined in claim 95, wherein the support substrate is a rigid substrate.

97. (New) A method as defined in claim 95, wherein the support substrate is a flexible substrate.

98. (New) A method as defined in claim 95, wherein the support substrate is attached to the semi-conductor film by bonding.

99. (New) A method as defined in Claim 79 , wherein in said anodizing step, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current that is changed and wherein in the anodizing step, the electrolytic solution is the same.

100. (New) A method as defined in Claim 80 , wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first and second current density, respectively, and wherein in the anodizing steps, the electrolytic solution is the same.

101. (New) A method as defined in Claim 79, wherein in said anodizing step, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current that is changed and wherein the electrolytic solution used in the anodizing step varies.

102. (New) A method as defined in Claim 80, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first and second current density, respectively, and wherein the electrolytic solution used in the anodizing steps varies.

103. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing said semi-conductor substrate at a current density that is changed to provide a first porous layer adjacent said surface having a first porosity and a second porous layer adjacent said first porous layer opposite said surface, said second porous layer having a second porosity greater than said first porosity;

annealing said semi-conductor substrate in a hydrogen atmosphere after said step of anodizing said semi-conductor substrate to provide said second porous layer; and

forming at least one semi-conductor film on said surface.

104. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing said semi-conductor substrate at a first current density to provide a first porous layer adjacent said surface having a first porosity;

anodizing said semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent said first porous layer opposite said surface, said second porous layer having a second porosity greater than said first porosity;

annealing said semi-conductor substrate in a hydrogen atmosphere after said step of anodizing said semi-conductor substrate to provide said second porous layer; and

forming at least one semi-conductor film on said surface.

105. (New) A method as defined in claim 103 further comprising a step of separating said at least one semi-conductor film from said semi-conductor substrate.

106. (New) A method as defined in claim 104 further comprising a step of separating said at least one semi-conductor film from said semi-conductor substrate.

107. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

forming a first porous layer adjacent said surface having a first porosity;

forming a second porous layer within said first porous layer having a second porosity higher than said first porosity;

forming at least one semi-conductor film on said surface; and

separating said semi-conductor film from said semi-conductor substrate.

108. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate to provide a second porous layer adjacent the first porous layer opposite the surface, said second porous layer having a second porosity greater than said first porosity;

forming a semi-conductor film on the first porous layer; and

separating the semi-conductor film from the semi-conductor substrate along a line of relative weakness defined in or adjacent said second porous layer.

109. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing the semi-conductor substrate at a first current density to provide a first porous layer adjacent the surface having a first porosity;

anodizing the semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent the first porous layer opposite the surface, the second porous layer having a second porosity greater than the first porosity;

anodizing the semi-conductor substrate at a third current density different from said second current density to provide a third porous layer adjacent the second porous layer, the third porous layer having a third porosity different from said second porosity;

forming at least one semi-conductor film on the surface and first porous layer; and

separating the semi-conductor film from the semi-conductor substrate along a line of relative weakness defined at the layer of the first through third porous layers having the highest porosity.

110. (New) A method as defined in claim 109, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first, second and third current density, respectively.

111. (New) A method as defined in claim 110 wherein the electrolytic solution comprises hydrogen fluoride and a hydrocarbon alcohol.

112. (New) A method as defined in claim 110, wherein in the anodizing steps, the composition of the electrolytic solution used in each anodizing step is the same.

113. (New) A method as defined in claim 110, wherein in the anodizing steps, the composition of the electrolytic solution used in the anodizing steps varies.

114. (New) A method as defined in claim 109, further comprising the step of annealing the semi-conductor substrate in a hydrogen atmosphere after the third anodizing step and before the forming step.

A1 Cont

115. (New) A method as defined in claim 114, further comprising the step of oxidizing the anodized substrate after the third anodizing step and before the hydrogen annealing step.

116. (New) A method as defined in claim 109, wherein in the forming step the semi-conductor film is epitaxially grown.

117. (New) A method as defined in claim 109, wherein the semi-conductor substrate is a single crystal silicon substrate.

118. (New) A method as defined in claim 109, wherein the semi-conductor substrate is an impurity-doped semi-conductor substrate.

119. (New) A method as defined in claim 109, further comprising the step of attaching a support substrate to the semi-conductor film after the forming step and before the separating step.

120. (New) A method as defined in claim 119, wherein the support substrate is a rigid substrate.

121. (New) A method as defined in claim 119, wherein the support substrate is attached to the semi-conductor film by bonding.

122. (New) A method as defined in Claim 109, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first, second and third current density, respectively, and wherein in the anodizing steps, the electrolytic solution is the same.

123. (New) A method as defined in Claim 109, wherein in said anodizing steps, the semi-conductor substrate is contacted by an electrolytic solution and exposed to a flow of current at said first, second and third current density, respectively, and wherein the electrolytic solution used in the anodizing steps varies.

124. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing said semi-conductor substrate at a first current density to provide a first porous layer adjacent said surface having a first porosity;

anodizing said semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent said first porous layer opposite said surface, said second porous layer having a second porosity greater than said first porosity;

annealing in a hydrogen atmosphere after said step of anodizing to provide said second porous layer; and

forming at least one semi-conductor film on said surface.

125. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing said semi-conductor substrate at a first current density to provide a first porous layer adjacent said surface having a first porosity;

anodizing said semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent said first porous layer opposite said surface, said second porous layer having a second porosity greater than said first porosity;

annealing said semi-conductor substrate after said step of anodizing said semi-conductor substrate to provide said second porous layer; and

forming at least one semi-conductor film on said surface.

126. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

anodizing said semi-conductor substrate at a first current density to provide a first porous layer adjacent said surface having a first porosity;

anodizing said semi-conductor substrate at a second current density higher than said first current density to provide a second porous layer adjacent said first porous

layer opposite said surface, said second porous layer having a second porosity greater than said first porosity;

annealing said semi-conductor substrate in a hydrogen atmosphere after said step of anodizing said semi-conductor substrate to provide said second porous layer; and

forming at least one semi-conductor film on said surface.

127. (New) A method as defined in claim 124, 125 or 126 further comprising a step of separating said at least one semi-conductor film from said semi-conductor substrate.

128. (New) A method for making a thin film semi-conductor comprising the steps of:

providing a semi-conductor substrate having a surface;

forming a first porous layer adjacent said surface having a first porosity;

forming a second porous layer within said first porous layer having a second porosity higher than said first porosity;

forming at least one semi-conductor film on said surface; and

separating said semi-conductor film from said semi-conductor substrate.

129. (New) A method for making a semiconductor film comprising the steps of:

providing a semiconductor substrate having a surface;

forming a porous layer adjacent said surface, the porous layer comprises a first porous layer having a first porosity and a second porous layer having a second porosity higher than said first porosity and a third porous layer having a third porosity different from said second porosity;

forming at least one semiconductor film on said surface; and

separating semiconductor film from said semiconductor substrate.

130. (New) The method as claimed in claim 129, wherein said first porous layer is formed by anodization.

131. (New) The method as claimed in claim 129, wherein said second porous layer is formed by anodization.

132. (New) The method as claimed in claim 129, wherein said third porous layer is formed by anodization.

133. (New) The method as claimed in claim 129, further comprising the step of:

after said porous layer forming step and prior to said semiconductor film forming step, annealing said semiconductor substrate in a hydrogen atmosphere.--